

REMARKS

Claims 13-42 remain in this application.

I. CLAIM REJECTIONS – 35 USC § 102**A. Examiner's Statements**

The examiner rejects claims 13-36 under 35 U.S.C. § 102(b) as being anticipated by Schlienger (U.S. Patent No. 5,136,137).

B. Claims 13-16

Applicant traverses the rejections and respectfully submits that the claims are allowable. Claims 13-16 of the present application require a rotatable drum having an inlet end and an outlet end with said inlet end attached to an inlet bulkhead by a first seal and said outlet end attached to an outlet bulkhead by a second seal. Schlienger, however, discloses only rotary seal 56 around spindle 46. Schlienger does not disclose first and second seals between the inlet end and inlet bulkhead, and the outlet end and outlet bulkhead, respectively. Thus, interior space 24 of Schlienger is in communication with the space between drum 30 and vessel 12. It follows that the inside of drum 30 of Schlienger is not sealed from the outside of drum 30, as required by claims 13-16.

Claims 13-16 of the present application require an enclosure disposed about said drum having an inlet end with an enclosure inlet opening and an outlet end with an enclosure outlet opening for circulating hot gas over the outside of said drum to heat the material in said drum. Schlienger does not disclose circulating hot gas over the outside of the drum to heat the material in the drum. Schlienger states merely that cooling of reactor 200 may be accomplished by, e.g., gas cooling applied to the outer surfaces of drum 210 as required. The heat in Schlienger is provided by e.g., torch 72, not by circulating hot gas over the outside of the drum as recited by the claims, thus Schlienger cools the drum rather than circulating hot gas to heat the material in the drum.

Claims 13-16 of the present application require a plasma reactor connected to the drum outlet bulkhead opening for receiving and processing waste from the drum. Schlienger discloses plasma torch 72 acting within vessel 12. Schlienger does not disclose a plasma reactor, as recited by the claims, connected to the drum outlet bulkhead opening.

Claims 13-16 require a recirculation blower with an outlet connected to the gas removal opening of the plasma reactor, for blending created reactor gas with gas circulated around the

drum. Schlienger does not disclose a recirculation blower outlet connected to the gas removal opening of the plasma reactor, does not disclose blending created reactor gas with gas circulated around the drum, and does not disclose circulating gas around the drum.

C. Claims 17-23

Applicant traverses the rejections and respectfully submits that the claims are allowable. Claims 17-23 of the present application require a rotatable drum having an inlet end and an outlet end with said inlet end attached to an inlet bulkhead by a first seal and said outlet end attached to an outlet bulkhead by a second seal. Schlienger, however, discloses only rotary seal 56 around spindle 46. Schlienger does not disclose first and second seals between the inlet end and inlet bulkhead, and the outlet end and outlet bulkhead, respectively. Thus, interior space 24 of Schlienger is in communication with the space between drum 30 and vessel 12. It follows that the inside of drum 30 of Schlienger is not sealed from the outside of drum 30, as required by claims 17-23.

Claims 17-23 of the present application require an outlet bulkhead having a solids outlet opening for removing the solid material from the drum and a hot gas inlet opening, for receiving a hot gas, with the drum configured such that hot gas flows through the hot gas inlet opening, heats the waste, and flows out a gas outlet opening. Schlienger does not disclose an outlet bulkhead with a solids outlet opening and a hot gas inlet opening as recited by the claims.

Claims 17-23 of the present application require a plasma reactor connected to the solids outlet opening for receiving and processing solid material from the drum. Schlienger discloses plasma torch 72 acting within vessel 12. Schlienger does not disclose a plasma reactor, as recited by the claims, connected to the solids outlet opening for processing solid material from the drum. The afterburner of Schlienger is not connected to the solids outlet opening as recited by the claims.

D. Claims 24-27

Applicant traverses the rejections and respectfully submits that the claims are allowable. Claims 24-27 of the present application require a rotatable drum having an inlet end and an outlet end with said inlet end attached to an inlet bulkhead by a first seal and said outlet end attached to an outlet bulkhead by a second seal. Schlienger, however, discloses only rotary seal 56 around spindle 46. Schlienger does not disclose first and second seals between the inlet end and inlet bulkhead, and the outlet end and outlet bulkhead, respectively. Thus, interior space 24 of

Schlienger is in communication with the space between drum 30 and vessel 12. It follows that the inside of drum 30 of Schlienger is not sealed from the outside of drum 30, as required by claims 24-27.

Claims 24-27 of the present application require an outlet bulkhead having a solids outlet opening for removing the solid material from the drum and a hot gas inlet opening, for receiving a hot gas, with the drum configured such that hot gas flows through the hot gas inlet opening, heats the waste, and flows out a gas outlet opening in an inlet bulkhead. Schlienger does not disclose an outlet bulkhead with a solids outlet opening and a hot gas inlet opening as recited by the claims.

Claims 24-27 of the present application require a plasma reactor connected to the solids outlet opening for receiving and processing solid material from the drum. Schlienger discloses plasma torch 72 acting within vessel 12. Schlienger does not disclose a plasma reactor, as recited by the claims, connected to the solids outlet opening for processing solid material from the drum. The afterburner of Schlienger is not connected to the solids outlet opening as recited by the claims.

Claims 24-27 of the present invention require a second plasma reactor. Schlienger discloses only multiple plasma torches, not multiple plasma reactors, as required by the claims. Further, Schlienger does not disclose a first plasma reactor connected to the solids outlet in combination with a second plasma reactor connected to the gas outlet.

E. Claims 28-36

Applicant traverses the rejections and respectfully submits that the claims are allowable. Claims 24-27 of the present application require a rotatable drum having an inlet end and an outlet end with said inlet end attached to an inlet bulkhead by a first seal and said outlet end attached to an outlet bulkhead by a second seal. Schlienger, however, discloses only rotary seal 56 around spindle 46. Schlienger does not disclose first and second seals between the inlet end and inlet bulkhead, and the outlet end and outlet bulkhead, respectively. Thus, interior space 24 of Schlienger is in communication with the space between drum 30 and vessel 12. It follows that the inside of drum 30 of Schlienger is not sealed from the outside of drum 30, as required by claims 28-36.

Claims 28-36 of the present application require an enclosure disposed about said drum having an inlet end with an enclosure inlet opening and an outlet end with an enclosure outlet opening for circulating hot gas over the outside of said drum to heat the material in said drum.

Schlienger does not disclose circulating hot gas over the outside of the drum to heat the material in the drum. Schlienger states merely that cooling of reactor 200 may be accomplished by, e.g., gas cooling applied to the outer surfaces of drum 210 as required. The heat in Schlienger is provided by e.g., torch 72, not by circulating hot gas over the outside of the drum as recited by the claims, thus Schlienger cools the drum rather than circulating hot gas to heat the material in the drum.

Claims 28-36 of the present application require a plasma reactor connected to the solids outlet opening for receiving and processing solid material from the drum. Schlienger discloses plasma torch 72 acting within vessel 12. Schlienger does not disclose a plasma reactor, as recited by the claims, connected to the solids outlet opening for processing solid material from the drum. The afterburner of Schlienger is not connected to the solids outlet opening as recited by the claims.

Claims 28-36 require a recirculation blower with an outlet connected to the gas removal opening of the plasma reactor, for blending created reactor gas with gas circulated around the drum. Schlienger does not disclose a recirculation blower outlet connected to the gas removal opening of the plasma reactor, does not disclose blending created reactor gas with gas circulated around the drum, and does not disclose circulating gas around the drum. Further, Schlienger does not disclose first and second conduits as recited by the claims for removing circulated gas and collecting drum vapors and gases.

II. CLAIM REJECTIONS - 35 U.S.C. § 103

A. Examiner's Statements

The examiner rejects claims 37-42 under 35 U.S.C. § 103(a) as being unpatentable over Schlienger (U.S. Patent No. 5,136,137).

B. Claims 37-42

Applicant respectfully traverses the Examiner's rejections of claims 37-42 under § 103(a) as being unpatentable over Schlienger. Applicant submits that, contrary to MPEP § 2143, the Examiner has failed to make a *prima facie* case of obviousness in rejecting the claims in that (1) the Examiner has failed to cite references that teach or suggest all of the elements recited in the rejected claims, and (2) the reference cited by the Examiner teaches away from the claimed invention at the time the invention was made.

Applicant repeats the arguments presented above with respect to claims 28-36. Schlienger does not disclose a second plasma reactor, as acknowledged by the Examiner. Schlienger teaches a

second plasma torch to prevent slag freezing but does not fairly teach or suggest a second plasma reactor having a third gas removal opening connected by a third conduit to the enclosure inlet opening, as required by the claims. Further, Schlienger does not disclose a recirculation blower outlet connected to the third conduit for blending gas created in the second plasma reactor with gas circulated over the drum. Thus the Examiner has failed to make a *prima facie* case of obviousness in rejecting the claims because the Examiner has failed to cite references that teach or suggest all of the elements recited in the rejected claims.

Further, Schlienger teaches away from the claimed invention. Claims 37-42 require a second plasma reactor with a third gas removal opening for outlet gas, which the recirculation blower circulates in the enclosure over the outside of the drum for *heating* the material in the drum. Schlienger, on the other hand, teaches *cooling* the drum 200, not heating, as required by the claims. See, e.g., col. 8, ll. 45-48 ("Cooling of reactor 200 could be accomplished ... as required"); col. 8, ll. 55-56 ("The vessel 202 would normally be cooled as the process continues."). Accordingly, the reference cited by the Examiner teaches away from the claimed invention at the time the invention was made.

III. AMENDMENTS MADE NOT RELATED TO PATENTABILITY

The applicant amends claims 22, 41, and 42 to correct a typographical error with respect to inserting the text "of" to more clearly, correctly, and properly claim the invention and not for purposes of patentability. These statements are not an admission that the other amendments were made for purposes of patentability, meant to be limiting in any way, or meant to be all-inclusive of amendments not made for purposes of patentability.

IV. STATEMENT REGARDING CLAIMS

The applicant comments on the allowability of the claims by addressing the examiner's comments in this paper as well as previously during the prosecution of this application. By doing so, the applicant is in no way limiting its ability to argue additional points of novelty regarding the independent claims or dependent claims at a later date.

CONCLUSION

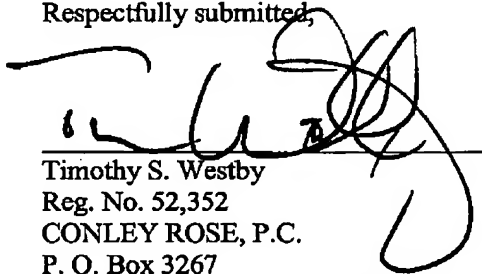
The applicant respectfully requests reconsideration the pending claims and that a timely Notice of Allowance be issued in this case. If the examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned.

In the course of the foregoing discussions, the applicant may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. There may also be other distinctions between the claims and the prior art that have yet to be raised, but that may be raised in the future.

Unless the applicant has specifically stated that an amendment was made to distinguish the prior art, it was the intent of the amendment to further clarify and better define the claimed invention and the amendment was not for the purpose of patentability. Further, although the applicant may have amended certain claims, the applicant has not abandoned its pursuit of obtaining the allowance of these claims as originally filed and reserves, without prejudice, the right to pursue these claims in a continuing application.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769 (ref. 1949-00701) of Conley Rose, P.C., Houston, Texas.

Respectfully submitted,



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